STATEMENT OF CONSIDERATIONS

PETITION FOR ADVANCE WAIVER OF PATENT RIGHTS BY KENNAMETAL INC. UNDER SUBCONTRACT NO. QZ001 UNDER PRIME CONTRACT NO. DE-FG36-04GO14041 WITH THE UNIVERSITY OF UTAH; W(A)-04-011; CH-1181

The Petitioner, Kennametal, Inc., has requested a waiver of domestic and foreign patent rights for subject inventions arising under its subcontract under the above referenced Prime Contract entitled "Energy Efficient Process for Synthesis and Consolidation of Cemented Tungsten Carbide." This waiver does not apply to the rights of other parties, those subject to Public Law 96-517, as amended, and rights in inventions made by employees of the National Laboratories.

The objective of the project is to develop an energy efficient process for the synthesis and consolidation of cemented tungsten carbide (WC). The work is to produce nano-sized WC and Co powders from a vapor-phase mixture of chlorides of both WC and Co and methane-hydrogens. The powder will then be sintered by an improved ultra-high pressure rapid heating compaction process. The high pressure technology utilizes rapid omni-directional compression to pressurize the powder. Further, a new glass having better electrical and heat conductivity properties will be used in the rapid omni-directional compression process.

The total cost of the project is \$2.6 million. The cost share under the prime contract is expected to be \$1.3 million (50%). Of the total cost share amount, Petitioner will contribute \$.4 million or about 30%. This waiver is contingent upon the Petitioner maintaining the above cost sharing over the course of its subcontract under the prime contract.

As noted in its waiver petition, Petitioner has been manufacturing tungsten carbide products since 1938 and has been granted over 545 patents in this field since 1976. Petitioner's technical competence is in the manufacturing process of tungsten carbide, cemented tungsten carbide, and ceramic compositions, geometries for metal cutting and other tools. Additionally, Petitioner has an established commercial position for cemented tungsten carbide worldwide. A large percentage of Petitioner's global sales of approximately \$1.8 billion in fiscal year 2003 is attributed to sales of cemented WC products. Petitioner has also made substantial development and manufacturing investments with five plants that produce commercial grade WC powder and nine plants that consolidate cemented WC. Considering Petitioner's technical expertise, established market position, and significant investment in this technology including sizable cost sharing in this project, it is reasonable to conclude that Petitioner will continue to develop and ultimately commercialize the technology and products which may arise from this subcontract.

Petitioner has agreed that this waiver shall be subject to the march-in and preference for U.S. industry provisions, as well as the U.S. Government license, comparable to those set out in 35 U.S.C. 202-204. Further, Petitioner has agreed to the U.S. competitiveness provisions as attached to this Statement. In brief, Petitioner has agreed that products embodying intellectual property developed under this agreement shall be substantially manufactured in the United States, and that Petitioner will not license, assign or otherwise transfer any waived invention to

any entity unless that entity agrees to these same requirements. Additionally, Petitioner has agreed to contractor data licensing provisions as attached herein.

Referring to item 10 of the waiver petition, granting this waiver is not anticipated to have any adverse impact on competition. Petitioner is not the largest provider of metal cutting tools and tooling systems in the world. There are approximately 40 companies engaged in cemented tungsten carbide business in the United States, and even more outside the United States. Also, there are competitive alternate products offered by other companies in the types of cemented WC products made by Petitioner. In fact, the success of this project can be expected to stimulate further investment and competition in this technology.

Considering the foregoing, it is believed that granting this waiver will provide Petitioner with the necessary incentive to invest its resources in the commercialization of the results of the subcontract in a fashion which will make the above technology available to the public in the shortest practicable time. Therefore, upon evaluation of the waiver petition and in view of the objectives and considerations set forth in 10 CFR 784, all of which have been considered, it is recommended that the requested waiver be granted.

Daniel D. Park
Assistant Chief Counsel
Intellectual Property Law Division

Date: 2/25/04

Based upon the foregoing Statement of Considerations and representations in the attached waiver petition, it is determined that the interests of the United States and the general public will best be served by a waiver of patent rights of the scope described above, and therefore the waiver is granted. This waiver shall not apply to any modification or extension of the subcontract, where through such modification or extension, the purpose, scope or cost of the subcontract has been substantially altered.

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Buddy Garland
Program Manager
Industrial Technology Program

EE-20

2/27/04 Date: APPROVAL.

Paul A. Gottlieb

Assistant General Counsel for Technology Transfer and Intellectual Property

Date: 3-1-0K

WAIVER ACTION - ABSTRACT W(A)-04-011

REQUESTOR

CONTRACT SCOPE OF WORK

RATIONALE FOR DECISIONDISPOSITION

Kennametal Inc.

Energy Efficient Process for Synthesis and Consolidation of Cemented Tungsten Carbide

50% cost sharing

(t) U. S. Competitiveness

The Contractor agrees that any products embodying any waived invention or produced through the use of any waived invention will be manufactured substantially in the United States unless the Contractor can show to the satisfaction of the DOE that it is not commercially feasible to do so. In the event the DOE agrees to foreign manufacture, there will be a requirement that the Government's support of the technology be recognized in some appropriate manner, e.g., recoupment of the Government's investment, etc. The Contractor agrees that it will not license, assign or otherwise transfer any waived invention to any entity unless that entity agrees to these same requirements. Should the Contractor or other such entity receiving rights in the invention undergo a change in ownership amounting to a controlling interest, then the waiver, assignment, license, or other transfer of rights in the waived invention is suspended until approved in writing by the DOE.

Rights in Data - General (JUN 1987), is amended by adding paragraph (k) as follows:

- (k) <u>Contractor Licensing</u>. Except as may be otherwise specified in this contract as data not subject to this paragraph, the contractor agrees that upon written application by DOE, it will grant to the Government and responsible third parties, for purposes of practicing a subject of this contract, a nonexclusive license in any limited rights data or restricted rights software on terms and conditions reasonable under the circumstances including appropriate provisions for confidentiality; provided, however, the contractor shall not be obliged to license any such data if the contractor demonstrates to the satisfaction of the Secretary of Energy or designee that:
- (1) Such data are not essential to the manufacture or practice of hardware designed or fabricated, or processes developed, under this contract;
- (2) Such data, in the form of results obtained by their use, have a commercially competitive alternate available or readily introducible from one or more other sources;
- (3) Such data, in the form of results obtained by their use, are being supplied by the contractor or its licensees in sufficient quantity and at reasonable prices to satisfy market needs, or the contractor or its licensees have taken effective steps or within a reasonable time are expected to take effective steps to so supply such data in the form of results obtained by their use; or
- (4) Such data, in the form of results obtained by their use, can be furnished by another firm skilled in the art of manufacturing items or performing processes of the same general type and character necessary to achieve the contract results.